

Variation in the wing-markings of *Tephritis (Oxyna) flavipennis*, Lw. (With plate.)

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The Dipterous family *Trypetidae*, to which the above species belongs, is composed of Acalyptrate Muscids with, in the majority of cases, prettily mottled or banded wings; the shape and disposition of these wing-markings constituting specific, and to a certain extent, generic characters. Many of the species live in the larval stages in the flower-heads, or stems, or in galls on the stems or roots of *Compositae*: others live in the seeds, or fruit, or mine the leaves, of various plants. The imagines in many cases are never found far away from their food-plant, and are often sporadic in their appearance, so that a species which for many years may have been considered a great rarity suddenly turns up in considerable numbers; this has been the case so far as my experience goes with the species under discussion, *T. flavipennis*: over forty years collecting by the late Mr. Verrall produced only two specimens, but in June and July, 1904 and 1911, Mr. C. G. Lamb of Cambridge found the species in a very limited area in the parish of St. Merryn (Cornwall) and could have taken any number of specimens; he called my attention to the great variation displayed in the wing-markings of his long series, and very kindly placed the specimens unreservedly at my disposal for purposes of study. Owing to the great use made of characters in the wing-markings for distinguishing species, the publication of a few photographs taken by my friend Mr. Hugh Main, showing, to a certain extent, the amount of variation in Mr. Lamb's specimens, may not be without scientific interest.

T. flavipennis, Lw., so closely resembles two other British species, *parietina*, Lw., and *proboscidea*, Lw., that Loew in his monumental work *Die Europäischen Bohrfliegen* (1862) expressed a doubt as to whether they were not really all varieties of one species; he, however, overlooked the important character of an extra pair of dorso-central bristles on the thorax of *flavipennis*, making three pairs in all, while *parietina* and *proboscidea* have only two pairs of such bristles. The larva of *T. flavipennis* lives in galls on the root-stock of *Achillea millefolium*.

T. parietina, L., has rather smaller eyes and consequently larger cheeks than *flavipennis*, and the proportion of depth to length of head is more equal, while the proboscis is not quite so long. On the wings the crossveins are rather closer, and the triangle of hyaline spots having its base on the costa is not so directly over the crossvein closing the discal cell, but slightly beyond it. I have not yet seen a British specimen, but as the larvæ live in the stems of *Artemisia vulgaris*, a common British plant,; the record as British is probably correct.

T. proboscidea, Lw., has more the wings of *parietina* and the head of *flavipennis*, but in addition to the one pair of black incurved lower fronto-orbital bristles, there are 1-2 pairs of quite small, whitish, incurved bristles that are absent in the other two species; moreover *proboscidea* normally has only two pairs of scutellar bristles, while the other two species normally have four. The larvæ live singly in galls on the root-stock of *Chrysanthemum leucanthemum*.

The Plate is self-explanatory, the top left hand figure showing a specimen with the pale markings abnormally extensive, those below this and on the right showing a gradual restriction of these pale